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THE WORK OF THE OFFICE OF FARM MANAGEMENT AND ITS RELATION TO THE AGRICULTURAL EXPERIMENT STATIONS.[1]

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It is with great pleasure that I find myself representing the interests of economic research at a meeting of experimental station directors. Prior to the days of experiment stations the economics of agriculture was better developed than were the physical and biological sciences in their relation to agricultural problems. As evidence of this condition attention is called to the English literature of the latter part of the eighteenth century and the first part of the nineteenth, especially the extensive writings of Arthur Young and William Marshall, the county agricultural surveys made by the Board of Agriculture and the writings of Adam Smith, James Anderson, David Ricardo, T. R. Malthus, and others relating to the economics of agriculture from the individual, the social and the national point of view.

That the new impetus to agricultural research should be in the less well developed fields is rational, and since it was work requiring the experimental method which was most needed it is perfectly easy to understand why the institutions established by Federal aid were called experiment stations instead of research stations. With the development of the experiment stations those lines of research work requiring the experimental methods have made great progress, but the slight attention given, for the time, to other methods of research has left subjects like economics, which lend themselves to the accounting, statistical, historical and geographical methods rather than to experimental methods, relatively undeveloped. Should not the experiment station study all the forces in the farmer's environment whether they be physical, biological or economic forces? If not, should another research organization coördinate with the experiment stations be developed for this work? The directors of experiment stations are answering these questions by accepting the view that every method which will throw light on the subject should be used in agricultural investigations and that the whole list of problems confronting the farmers should be studied. With this broadening of the scope of the experiment stations the studies which have been introduced under the various titles of farm management, farm economics, rural economics and agricultural economics, rural life and rural sociology, require our especial attention.

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As early as 1905 the Office of Experiment Stations established a section on rural economics in the Experiment Station Record. In 1904 the United States Department of Agriculture started the work in farm management which remained in the Bureau of Plant Industry until 1915, when the Office of Farm Management was established in the Office of the Secretary. In 1913 the department started work in markets and rural organization. In 1908 the Graduate School of Agriculture first gave recognition to this subject by giving it a place in one evening program. In 1910 agricultural economics, farm management and rural sociology were given a major position in the graduate school. By this time many colleges and stations were putting in courses of study and stimulating research in this field.

In the establishment of this new line of work, men especially trained for the work were scarce. As a result recruits were necessarily accepted from various other branches of agriculture and from the field of practical experience.

Courses of study have been developed in this field and the condition which has been mentioned has improved rapidly within recent years. An important step was taken when Secretary Houston called a representative committee together last February to plan the reorganization of the Office of Farm Management. That committee outlined the research work to be carried out by the proposed Bureau of Farm Management and Farm Economics in coöperation with the agricultural colleges and experiment stations. This outline of work, with slight modifications made by later conferences, is as follows:

Outline of Research Work in Farm Management and Farm Economics.

I. Cost of production—
    1. Financial records.
    2. Enterprise records.
    3. Complete cost records.
    4. Price relations.
    5. Basic unit factors of cost.

II. Farm organization—
  1. Types of farming—
    (*a*) Determination of enterprises.
    (*b*) Plan or combination of enterprises.
  2. Size of business.
  3. Farm plan or layout.
  4. Effective use of labor and equipment.
  5. Intensity of production.
  6. Business methods.
III. Farm Finance—
  1. Methods of financing.
  2. Insurance.
  3. Taxation.
  4. Other financial relations.
IV. Farm labor—
  1. Supply and movement.
  2. Trend of population.
  3. Living and housing problems.
  4. Creating new productive enterprises for farm labor.
  5. Standards of supervision and compensation for farm labor.
V. Agricultural history and geography—
  1. Trend of agricultural development.
  2. Shifts of agricultural production.
  3. Relation of American to foreign agriculture.
  4. Supervision of atlas.
VI. Land economics—
  1. Land resources.
  2. Land values.
  3. Land ownership and tenancy.
  4. Land settlement and colonization.
  5. Land policies.
VII. Farm life studies—
  1. Rural home life.
  2. Opportunities for social contacts in typical rural communities.
  3. Rural organization.
  4. The relation of educational and religious institutions to farm-life problems.
  5. The relation of health and the various forms of disability to rural welfare.
  6. Social effects of the various types of farm labor, tenancy and landlordism.

The first section of this outline deals with the application of *accounting methods* to the problem of the farmer. Just as the experiment station was named for the method of research most prominent in the minds of those desiring to promote agricultural research when the Hatch act was passed in 1887, so this section has been named "Cost of production" to indicate the outstanding result which is popularly expected from the use of the accounting method.

The accounting method may be used extensively as in the surveys and the financial accounts, or more intensively as in the enterprise accounts and the detailed records of all the activities of the farm.

The accounting method throws much light on the farmer's problem of what to produce and how to produce it. Wherever the farmer has a choice between lines of production and between means to be used in production, accounting will provide some of the facts essential to a rational decision as to what to produce and the means to use in production in order to secure maximum profits under given conditions as to costs and prices.

Another aspect of this problem, and one which has received much attention in recent years is the relation of costs to price. In our complex economic life with its high degree of specialization and division of labor both as between individuals and between regions, the view that competitive forces adjust prices in a manner fair and just has not been accepted for all conditions. On the other hand, the view has gained ground that where a group of men have made permanent investments in the agencies essential to producing an article, let us say milk for example, and where custom tends to bind the price of that article to an old level when all the elements of cost are rising, it is in the interests of sound public policy to adjust these price levels in such a manner as will preserve this production. It is believed that there are conditions where a public loss will be sustained if competitive forces are left to work in their slow and crude way to readjust the price level by destroying a part of an essential industry in order to force prices up only to find that the whole industry was needed and that a period of great scarcity and unnecessarily high prices results from a shortage in supply.

Wherever the competitive régime breaks down the problem of fair price arises, and wherever the question turns on fair price attention is focused on the study of costs. Thus it is that the cost of production is in the foreground in this day of unsettled price conditions. In the minds of some, accounting has failed to play a satisfactory rôle in this regard. This difficulty arises out of the fact that but little farm accounting had been done and that had been directed to the problems of farm organization rather than the problems of price regulation. With adequate funds the accounting method will render invaluable service in the study of the cost of production in its relation to the problem of fair price. The basic unit factors of production which will be ascertained for this purpose will serve not only for the emergencies when price regulation is necessary but also as an aid in constructive extension work in farm organization.

Farm Organization, the second section in the committee outline, is the assembly plant where the results of research in the other sections and to some extent in other bureaus are brought together into a united whole for educational purposes. Here the point of view is that of the farm manager with all the conditions of his farm and community with respect to the land, labor and capital on the one hand and market conditions on the other forming the basis of decisions as to what to produce, how to use labor and equipment, how to determine the size of the farm and the intensity of culture in order to win maximum profits. Thus a highly perfected art of farm management is the goal of farm economics viewed from the standpoint of the individual.

It is not believed that these questions can be settled once for all and in general. The work is that of developing methods of analyzing the problem on the specific farm. Where this section leaves off is where the extension work begins without which our work will be like a light hidden under a bushel. The task will be completed when each farmer has learned to figure for himself, so as to adjust his farming operations to ever changing conditions to secure maximum profits for himself and maximum economy in the nation's production.

Farm finance is an important field requiring the attention of specialists in credit, insurance and taxation who are thoroughly cognizant of the farmer's conditions and needs and who for this reason are able to study those problems from the standpoint of efficient farm organization, land tenure and agricultural progress.

Farm labor is a subject which has received too little scientific consideration in this country. The five headings given in the outline are suggestive of some of the topics to be considered. The proper study of this subject will throw much light upon the farm labor question. The study of the farm labor problems in foreign countries will help us better to appreciate our present labor conditions and to comprehend in some measure the trend of affairs. In some parts of this country the labor problem is closely associated with the tenant problem.

Agricultural history and geography may be looked upon as methods of studying various farm economic problems, but there is a subject matter which requires to be built up by specialists through a series of years in order that the materials may be available for application in the solution of the great variety of problems which arise from time to time. The Atlas of American Agriculture is the important work in progress in this section at the present time.

Land economics deals with a well organized group of problems which in the long run have a most profound influence upon the character of agriculture and the welfare of the agricultural population. Land is the farmer's savings bank. Whether or not the succeeding generations of farmers will be able to maintain their economic independence depends upon whether or not the distribution of the national dividend is such as to enable the farmer to save and invest in this bank enough to maintain control. There are immediate problems, such as better leasing systems, better methods of land settlement, a better understanding of a sound basis of land values, and an improved national land policy which may be looked upon as the immediate results to be secured from work in this field, but the great significance of the work in land economics lies in the discovery of those subtle dynamic forces which may be slowly but certainly bringing about changes in the relation of the farmer to the land. A thorough understanding of those forces is essential to their control and their control is an essential part of a constructive policy for American agriculture.

In *farm life studies* we come to the end in view in all efforts to improve agriculture. When the whole matter is sifted out it will be found that the conditions of living on the farm and in the rural community and the resulting attitude of mind of farm men and women toward their work and the land they till is at the root of the difficulties encountered in efforts to improve methods of farming and to promote the conservation of the land. In our efforts to secure better agriculture in order that we may have better living, have we not overlooked the fact that better living is one of the most potent means of securing the better agriculture. Attention has been focused too exclusively upon the field and the feed lot, the crops and the barns for storing them. The time has come for focusing upon the farm family, the unit of country life, and letting all these other matters find their proper places in the background of the picture. When this is done I am convinced that a new spirit can be breathed into scientific agriculture and it will become a living thing whose company will be eagerly sought. Those so-called leaders who say give us the dollars and we can do the rest are honest enough no doubt but they are mistaken. Study the history of individual farmers who have taken this view and you will find testimony in abundance of the struggle for money accompanied by the doing without the comforts of life followed by a move to town so soon as a competence has been secured. This is unfortunate from at least two fundamental points of view. First from the standpoint of the life itself for the long years of hard work and abstinence is all too often followed by disappointment in the seeking of satisfaction in retirement. Second, from the standpoint of the progress of agriculture this movement carries the best skill and judgment from the farm and shelves it where it renders no service.

What is needed is to make farming a business which can be carried on by people who are leading a satisfactory life while in the business so that each farmer may contemplate with pleasure a full life of activity on the farm under conditions such as will be attractive to his family. It has been demonstrated that this is a subject susceptible of scientific investigation. There are no lines of research more worthy of the state and federal research funds than the scientific study of farm life and the methods of making this life more attractive.

One of the committees on reorganization reported on methods of research as well as upon the subjects to be investigated. The methods of study were outlined as follows:

METHODS OF STUDY.

A. Survey method:
  This method may be used in making such studies as—
    1. Labor income.
    2. Farm enterprises.
    3. Farm practices.
    4. Farm costs.
  The value of this method depends upon—
    1. Trained investigators.
    2. Sufficient numbers of records.
    3. Representative data.
B. Cost accounting method:
  This method is valuable—
    1. For providing basic unit factors of farm production, which are essential to the proper farm organization, such as—
      (*a*) Labor requirements.
      (*b*) Feed requirements.
      (*c*) Material requirements.
    2. As a check on more extensive methods of farm analysis, and also to compare the results obtained by other methods.
C. Observation method:
  This method should be of value when used as preliminary or supplementary to other investigational work. It should not serve as a basis for conclusions.

D. Geographic method:

This method is valuable as a means of contributing information concerning the physical and economic factors which influence farm organization—

1. Climate.
2. Soil.
3. Topography.
4. Transportation.
5. Marketing facilities.
6. Market prices.

E. Historical method:

This method is valuable—

1. As a means of understanding the development of the farming industry.
2. To assist in the interpretation of the trend of agricultural production.

F. Statistical method:

This method, although involved in the other methods mentioned, may be used as a direct means of studying farm organization.

This method may be used for such studies as—

1. Cycle of production.
2. Price relationship.
3. Types of farming.

G. Experimental method:

The experimental method may be used to advantage in the study of certain problems, such as—

1. The proper degree of intensive culture.
2. The right balance of enterprises.
3. The proper unit of organization.

While each method is especially fitted for the assembling of a particular kind of material and for this reason one method may contribute more to the solution of a given problem than another, all these methods are important and no final conclusions should be stated on any subject until every method has been used which can contribute to its solution.

Division of Labor and Coöperation.

The committee on reorganization recognized that the establishment of right relations with other workers in the field of agricultural research demanded the right application of the principles of division of labor and coöperation. This applies not only with respect to the division of subject matter in the Department of Agriculture, among those trained in the physical and biological sciences on the one hand and those trained in economic research on the other and the coöperation of these groups of specialists in bringing back to the farmers well-rounded and well-balanced answers to their question, but also to the question of coöperation between the economic workers in the United States Department of Agriculture and the various colleges and experiment stations.

The recommendations of the committees on reorganization, as amplified by the committee on farm organization, which relate to the question of coöperation with the federal and state workers in this field are as follows:

COÖPERATIVE RELATIONS BETWEEN THE OFFICE OF FARM MANAGEMENT AND STATE COLLEGES AND EXPERIMENT STATIONS FOR INVESTIGATIONAL WORK.

It is recommended that the investigations of the Office of Farm Management requiring field work be carried on in coöperation with the State Colleges and Experiment Stations. Some of the benefits of such coöperation would be:

(1) To prevent duplication and to correlate activities.
(2) To promote the development of state departments.
(3) To unify the methods and improve the general character of all farm management work.

The following method of procedure in initiating relationships is suggested:

1. Projects for coöperative investigation may be proposed through either the proper administrative officers of the United States Department of Agriculture or of the State colleges or experiment stations.

2. Personal consultation between federal and state representatives is advised in initiating all important phases of investigational work.

3. The college or experiment station and the United States Department of Agriculture should agree mutually upon the designation of an individual to act as joint leader of farm management and farm economic investigations for the State and the Department of Agriculture.

4. A memorandum of agreement should be drawn up between the United States Department of Agriculture and the State college or experiment station, embodying the following points:

(*a*) Coöperative relations and methods of work:

Coöperative investigations in farm management and farm economics should be established in the various States upon the most equitable basis possible, in view of the conditions that exist within the states and the United States Department of Agriculture.

(*b*) Personnel:

It is recommended that when investigators and employees of the Bureau of Farm Management and Farm Economics are assigned to a state for work, they shall be considered as members of the Farm Management and Farm Economics staff in the state institution concerned, and thus represent the United States Department of Agriculture and the state. Men selected for work in the state shall be approved by the contracting parties, namely, the United States Department of Agriculture and the state college or experiment station. In the event that institutions do not have a Farm Management and Farm Economics staff, it is then recommended that any man assigned to work with the institution shall be considered a member of the investigational staff of the institution, his work to be administered in the usual manner in that institution.

(*c*) Approval of projects:

All projects undertaken by joint representatives or by investigators assigned to institutions shall be subject to approval by the interested authorities in the state concerned and by the Bureau of Farm Management and Farm Economics, United States Department of Agriculture. The projects within the states should be administered by the college or experiment station.

(*d*) Publication of data:

Data collected by coöperative effort should be equally available to both parties. Neither party should publish any of the data without consultation with the other party. In case of refusal to publish on the part of either party, the other party shall be free to publish the data on its own responsibility.

(*e*) Regional studies:

The larger regional or national projects undertaken by the United States Department of Agriculture shall be conducted in coöperation with the state colleges or experiment stations included within the region. In initiating the coöperation the various administrative officers of the states and the United States Department of Agriculture should be called together in so far as practicable to discuss the form of the project which shall be mutually undertaken. It is recognized that the preparation and publication of material covering a region involving two or more states is peculiarly a function of the United States Department of Agriculture, and that the investigation may best be carried out through coöperation with the several states concerned.

It is with these plans drawn up largely by men from the various states that the representatives of the Office of Farm Management come to you as directors of experiment stations asking for coöperation in the undertaking of economic investigations. Whether or not some of the representatives of the federal office might prefer to be independent of state relations, economy and efficiency point to the wisdom of our joining with you in the plan here outlined or upon some other plan which can be devised.

It is our desire that the director of each station designate the person or persons with whom we are to establish coöperative relations. The work in farm management and farm economics is organized differently in different institutions. It is not our purpose to have anything to say about your form of organization. Our one desire is to have a definite point of contact through which we can establish cooperative relations. In carrying out the work it is our desire to put the coöperation on a fifty-fifty basis so far as finances are concerned. The plans will, of course, be worked out jointly and it is our desire that the responsibility of carrying out the work from day to day and month to month shall be shouldered by the state project leader.

Never before were farmers more interested in economic questions. Leadership in thought as it relates to the economic forces with which the farmer has to deal is the duty of the experiment stations and the United States Department of Agriculture working coöperatively and harmoniously. With the thinking right the actions will not be far wrong, let the leadership in action be vested where it may. I should prefer to see the leadership in action vested in the farmers themselves, ever looking to the educational institutions for inspiration and facts which will direct their action to fruitful results.

My attention has been called to a movement to have the farmers raise funds and establish a farmers university devoted to research and education in the field of agricultural economics. I trust this call is more a manifestation of interest in the subject and of impatience due to the slowness with which progress has made than lack of confidence in the integrity of research work done by the experiment stations.

It takes time to train men for leadership in economic thought. This is the most difficult of the tasks undertaken by scientific workers in the field of agriculture. The danger is not so much in the slowness of the development as in failure to appreciate the importance of taking the precaution that solid, permanent work be done.

Economic questions are dealt with by everyone and in the absence of scientific results everyone feels his opinion is as good as the next one's. The danger is that men holding high positions in the field of agricultural education and research, but who are without training in economics, shall presume to lead thought in this difficult field. What is needed is a careful study and adequate presentation of facts on questions of this kind in order that truth rather than opinion may be presented in a form that it may become the basis of making improvements. Here is a large field of usefulness for the student of economic problems in the experiment stations and in the United States Department of Agriculture. Let us work together with the hope of directing thought into lines which will lead to rational action and to a solution of those economic questions which confront the American farmer, the right solution of which will go far to determine the course of American civilization.